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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,244	03/09/2005	Ludwig Schieferstein	C 2714 PCT/US	2856
23657	7590	02/28/2007		
COGNIS CORPORATION PATENT DEPARTMENT 300 BROOKSIDE AVENUE AMBLER, PA 19002			EXAMINER KHAN, AMINA S	
			ART UNIT 1751	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			02/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/527,244	SCHIEFERSTEIN ET AL.	
	Examiner	Art Unit	
	Amina Khan	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to applicants amendments filed on December 6, 2006.
2. Claims 14-33 are pending. Claims 1-13 have been cancelled.
3. All prior rejections are withdrawn.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 14-26 and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson, Jr. et al. (US 3,256,230).

Johnson, Jr. et al. teach polymeric compositions comprising (a) at least one copolymer comprising 25-99% by weight of at least one polymerizable fluorine containing compound and from 1-75% by weight of at least one polymerizable vinyl compound and (b) a polymer prepared from at least one polymerizable vinyl compound, the weight proportion of said copolymer and said vinyl polymer being such that the mixture contains at least 3% by weight of the fluorine component. Johnson, Jr. et al.

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further teach that the composition is a water dispersion that is applied to fabrics and paper in an aqueous bath containing from 0.3-10% by weight of the composition to render them oil and water repellant. Johnson, Jr. et al. further teach drying the compositions on the substrate (column 2, lines 5-40).

Johnson, Jr et al. further limit the n group in the perfluoroalkylacrylates to from 3 to about 14 (column 2, lines 64-65; column 3, lines 1-5). Johnson, Jr. et al. further teach that the vinyl compounds may be acrylates and alkyl methacrylates of which short and long chain varieties are cited such as octyl acrylate and methacrylate (column 3, lines 5-65). Johnson et al. further teach that the non-fluorine containing polymer is prepared from one or more of the non-fluorine containing monomers (column 4, lines 25-30). Johnson, Jr. et al. further teach that cationic and non-ionic emulsifying agents may be used. Johnson, Jr. et al. further teach that the polymers give a emulsion concentration of from about 5-50% (column 5, lines 1-7). In example 2, the emulsifying agent concentration is 1 part emulsifier/46.2 parts total composition (~2.1%).

Johnson, Jr. et al. does not teach all the instantly claimed embodiments in a single example and the compounds of formula (II) and is silent as to the percentages of the monomers in copolymer (b) and the ratios of copolymer (a) to copolymer (b).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the instantly claimed components in the instantly claimed ratios because Johnson, Jr. et al. clearly teach these components as beneficial in providing textiles with oil and water resistance even after many launderings and cleanings. Regarding the claimed proportions of monomers in copolymer (b) and the

ratios of copolymer (a) to (b), one of ordinary skill would have been motivated to optimize the ratios of these monomers and copolymers to maximize the oil and water repellancy imparted to the textiles, as optimization of a result effective variable only requires routine skill in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff*, 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I.

Regarding the compounds of formula (II), Johnson, Jr. discloses a compound which differs as an adjacent homolog. The claimed invention would have been obvious to the skilled artisan because close structural similarity of the reference compound

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suggests the claimed compound. One skilled in the art would expect the two compounds to have similar properties.

6. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson, Jr. et al. (US 3,256,230) in view of Maekawa (EP 1146103).

Johnson, Jr. et al. is relied upon as set forth above. Johnson, Jr. et al. clearly teach that the polymers may be dispersed in liquids other than water (column 6, lines 19-21).

Johnson, Jr et al. does not teach organic solvents.

Maekawa teaches water and oil repellant finishes for textiles comprising dispersing polymers in polyhydric alcohols such as ethylene glycol (page 9, paragraphs 0072-0075).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the compositions of Johnson, Jr. et al. by incorporating the organic solvents taught by Maekawa because Maekawa teaches glycol based dispersions of copolymers comprising fluorinated methacrylates/non-fluorinated methacrylates as beneficial in providing textiles with excellent water and oil repellency. Furthermore, Johnson, Jr. et al. invite the inclusion of dispersions based on liquids other than water. One of ordinary skill in the art would have been motivated to combine the teachings of the references absent unexpected results.

It is prima facie obvious to combine the two compounds, each taught for the same purpose, to yield a third composition for that very purpose. *In re Kerkhoven*, 205

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USPQ 1069, *In re Pinten*, 173 USPQ 801, and *In re Susi*, 169 USPQ 423 when ingredients are well known and combined for their known properties, the combination is obvious absent unexpected results. A person of ordinary skill in the oil and water repellent textile art would expect combinations of these materials to behave in the same fashion as the individual materials, absent unexpected results.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amina Khan whose telephone number is (571) 272-5573. The examiner can normally be reached on Monday through Friday, 8:30-5.

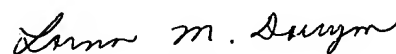
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Amina Khan, PhD
February 23, 2007



LORNA M. DOUYON
PRIMARY EXAMINER